REMARKS

In response to the Office Action mailed on October 16, 2006, Applicant(s) respectfully request(s) reconsideration.

Claims 1-30 are now pending in this Application.

Claims 1, 11, 14, 24 and 28-30 are independent claims and the remaining claims are dependent claims.

In this Amendment, claims 1, 2, 11, 14, 24 and 27-30 have been amended and claims 23 and 25-26 have been canceled. Applicants believe that the claims as presented are in condition for allowance. A notice to this affect is respectfully requested.

The Drawings have been objected to for irregularities in the reference numerals. These reference numerals have been corrected in the replacement drawings herein.

Claims 11, 14 and 25 have been objected to because of minor grammatical inconsistencies. These have been corrected by the above amendments.

Claims 29 and 30 have been rejected as non-statutory subject matter. These claims have been herein amended within the USPTO Guidelines on Computer Related Inventions and accordingly, it is respectfully requrested that the rejection under 35 U.S.C. 101 be withdrawn.

The Office Action rejects claims 1-6 and 10-30 under 35 U.S.C. §102(e) as being anticipated by U.S. Publication No. 2002/0178243 to Collins (Collins '243). Applicants respectfully disagree with these contentions and assert that the present claimed invention is not anticipated by any disclosure in the Collins '243 references.

The cited Collins '243 reference shows a standard interface, not a common object model. The standard interface specifies call sequences, sometimes referred to as signatures, for invoking processing methods via a stack call. In contrast, the common object model defines a common set of values applicable to, or normalizing, attribute specific parameters for each of the devices (page 8, lines 3-9 of the specification as filed). The common object model is distinguishable because the cited standard interface pertains to the transfer of control to the invoked method (paragraph

[0025]), typically by a stack call. In contrast, the common object model does not require or specify such a transfer of control.

In this manner, the claimed common object model does not require conformance by the corresponding devices, but rather is responsive to the devices. In other words, the Collins common interface defines a benchmark to which applicable devices must conform because it specifies an invocation to the preexisting API. In contrast, the claimed object model is adapted to conform to the devices, and is operable to accommodate or include values corresponding to the devices, rather than requiring the devices to conform. Accordingly, claim 1 has been herein amended with the subject matter of claim 2, to recite analyzing an interface specification indicative of the device specific parameters, identifying similarities between the device specific parameters corresponding to devices of different vendors, and defining the enumerated device specific parameters as indicative of a common parameter in the common object model, to further clarify and distinguish the present invention.

The Office Action suggests that Collins anticipates claim 2 at paragraph [0039]. With respect to claim 2, however, Collins does not identify common parameters, but rather merely determines if the parameters of the device ALREADY conform to the standard interface. As discussed above, in Collins '243, the device API bears the burden of conforming to the standard interface; in contrast, the claimed object model is adaptive to conform to the identified device specific parameters, discussed further at page 8, lines 12-23. Accordingly, Collins does not show, teach or disclose, alone or in combination, normalized parameters independent of device specific parameters, and identifying similarities in the device specific parameters and defining enumerated device specific parameters as indicative of a common parameter in the common object model, as now recited in amended claim 1.

Claim 11 has been further rejected based on Collins '243, citing paragraph [0007]. The Office Action suggests, specifically, that Collins teaches that the "common object model [is] operable to store the device specific parameters for each of the plurality of devices without enumerating the identified distinctions." Collins, however, discloses providing program code for translating the device interface into the standard

format required by the standard interface. Thus, Collins specifically calls for device-specific treatment via specialized code. Claim 11 requires no such specialized code.

In other words, the Collins standard interface requires an interface translator 250 and accompanying library 255 in the integration package 140 between the standard interface and device interfaces that are nonconforming. No such interface translator is required by claim 1.

In Collins, the disclosed common interface is driven by, and need conform to, the device specific parameters. As discussed above, the normalized parameters of the claimed object model are independent of the device specific parameters, not driven by them, as discussed at page 5, lines 10-11. This distinction is further codified in claims 7 and 8, now amended into claim 11, which recites that the devices including a varying arrangement of subdevices, each of the subdevices having device specific parameters, and that the device specific parameters include back end parameters, the back end parameters indicative of specific subdevices within the device, to further clarify and distinguish claim 11. Such back end parameters are unavailable via the device specific API in Collins, which defines the "front end" user visible characteristics. The claimed object model is therefore adaptive by being modeled to, rather than driving, the APIs of the respective devices (page 12, line 28-page 13 line 12).

In this manner, the object model corresponds more to the back end, or "device side" rather then the "server side" of the device interface. Collins discloses such a "device side" complement to the standard interface as a device interface 170, at paragraph [0039]. However, the device interface is required to conform to the standard interface, or remain inoperable (nonconforming). This is in stark contrast to the claimed object model, which is adaptable to the devices, not the reverse. In this manner it may be said that the teaching of Collins teach away from the claimed invention recited in claim 1.This adaptive nature is further distinguished by corresponding to (i.e. including attributes for storing) parameters of the "back end" storage device internals, rather then the "front end" corresponding to the API.

The Office Action further rejects the subject matter of claim 7 and 8 under 35 U.S.C. §103(a) based on Jantz, U.S. Patent No. 6,584,499 (Jantz '499). Jantz,

however, is concerned with configuring a large number of devices from the same configuration input (file, command, etc.). The thrust of Jantz, therefore, is multiplicative applicability of the same configuration, not an adaptive model receptive to all configurations. Jantz, therefore, solves the problem of a large installation having many similar devices, thus providing convenience to a user. The claimed invention teaches a single object model applicable to many devices, whether deployed in a large or small installation, and therefore benefits the software vendor by requiring only a generally applicable object model to be deployed. One of skill In the art would not look to Jantz '499 to modify Collins '243 because the Collins common interface nullifies the need for propagating mass configurations (the common interface should already be applicable). Further, even if one were to attempt to modify Collins '243 with Jantz the invention of claim 11 would still not be realized because the back end parameters are not realized by the mass operations of Jantz applied to the Collins common interface. Accordingly, amended claim 11 is submitted as allowable.

Independent Claim 14, rejected on similar grounds as Claim 1, has been herein amended with the subject matter of claim 23. Amended claim 14 now recites that the management application is further operable to compute the query response by interrogating device specific agents corresponding to the type of the device, to further clarify and distinguish the present invention. Further to the above discussion of claim 1, Collins '243 makes no showing, teaching or disclosure of device specific agents for responding to device queries. Collins alludes to a discovery operation for gathering device attributes (Para. [0043]), but this is performed via the common interface, not via device specific agents.

Claim 24, rejected on similar grounds as claim 1, has been amended with the subject matter of claims 25 and 26, to clarify that the device specific parameters identify interrelationships between the devices, as captured by the device specific agents. Nowhere does Collins show, teach, or disclose identifying interrelationships between devices.

Claim 28, rejected on similar grounds as claim 1, has been herein amended with the subject matter of claims 7, 8, 9 and 23, as per the above remarks, to further clarify and distinguish applicant's invention.

Claim 29 has been further amended as claim 28, and has been further amended with the subject matter of claim 2. Claim 29 is therefore submitted as allowable over the Collins '243 and Jantz '499 references, alone or in combination.

Claim 30 has been herein amended as claim 28, and to further recite that normalizing includes at least one of identifying, in the object model, a common parameter or defining a device specific parameter as an attribute in the object model, as discussed at page 12, lines 19-21. Claim 30 further recites the feature of subdevice parameters by reciting that the normalized parameters are codified for accessing the back end of the storage array device, as disclosed at page 13, lines 13-16. This feature, shown further in Fig. 8, allows responsiveness to queries for storage arrays having dissimilar arrangements of disk drives (subdevices) and is a feature not show, taught or disclosed, alone or in combination, in Collins '243 and/or Jantz '499.

As the remaining claims depend from, either directly or indirectly, from claims 1, 11, 14 or 24, all claims in the case are submitted as allowable. A notice to this effect is respectfully requested.

Applicant(s) hereby petition(s) for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-3735.

If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 616-9660, in Westborough, Massachusetts.

Respectfully submitted,

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